



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE KOPELOUSOS
SECRETARY

December 22, 2010

Monica Gourdine
Program Operations Engineer
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: Office of Design, Specifications
Section 713
Proposed Specification: 7130300 Permanent Tape Stripes and Markings Equipment.

Dear Ms. Gourdine:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

These changes were proposed by Chester Henson of the State Roadway Design Office to require the certification of proper thickness of pavement marking prior to acceptance.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965RP or rudy.powell@dot.state.fl.us.

If you have any questions relating to this specification change, please call Rudy Powell, State Specifications Engineer at 414-4280.

Sincerely,

Rudy Powell, Jr., P.E.
State Specifications Engineer

RP/cah

Attachment

cc: Gregory Jones, Chief Civil Litigation
Florida Transportation Builders' Assoc.
State Construction Engineer

PERMANENT TAPE STRIPES AND MARKINGS.**(REV 121-224-10)**

ARTICLE 713-3 (Page 805) is deleted and the following substituted:

713-3 Equipment.

Use equipment that is mobile and maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc.

Ensure the mechanical applicator is equipped with film cut-off device and a measuring device that automatically and accumulatively measures the length of each line placed with an accuracy tolerance of \pm *plus or minus* 2 percent. Tape may be placed by hand on short sections, 500 feet or less if the tolerances in dimensions and in alignment specified in 710-5 are met.

ARTICLE 713-4 (of the Supplemental Specification) is deleted and the following substituted:

713-4 Application.

713-4.1 ~~General Removal of Existing Traffic Stripes:~~ Remove existing traffic stripes and markings, such that scars or traces of removed markings will not conflict with new stripes and markings by a method approved by the Engineer.

Before applying traffic stripes and markings, remove any material by a method approved by the Engineer that would adversely affect the bond of the traffic stripes.

Apply a primer, sealer or surface preparation adhesive of the type recommended by the manufacturer. Ensure the tape stripes and markings adheres to the pavement surface.

Offset longitudinal lines at least 2 inches from construction joints on portland cement concrete pavement.

Apply traffic stripes or markings only to dry surfaces, and when the ambient air and surface temperature is at least 55°F and rising.

Apply striping to the same tolerances in dimensions and in alignment specified in 710-5. When applying traffic stripes and marking over existing markings, ensure that not more than 2 inches on either end and not more than 1 inch on either side of the existing line is visible.

Apply traffic stripes and markings to the pavement by means approved by the Engineer. The stripes and markings shall be installed immediately following the paving operation. Conduct field testing in accordance with FM 5-541. *Take test readings representative of the striping performance.* Remove and replace pavement stripes and markings not meeting the requirements of this Section at no additional cost to the Department.

Apply all final pavement markings prior to opening the road to traffic.

713-4.2 Thickness: Apply traffic stripes or markings such that, the stripes or markings will have a thickness ~~above the pavement surface~~ as designated on the Qualified Products List for the particular product used.

Measure, record and certify on a Department approved form and submit to the Engineer, the thickness of white and yellow pavement markings in accordance with FM- 5-541.

713-4.3 Retroreflectivity:

713-4.3.1 General: Black portions of contrast tapes and black masking tapes must be non-reflective and have a reflectance of less than 5 mcd/lx m². *Measure, record and certify on Department approved form and submit to the Engineer, the retroreflectivity of white and yellow pavement markings in accordance with Florida Method FM 5-541.*

713-4.3.2 Standard Markings: Apply white and yellow traffic stripes and markings that will attain an initial retroreflectivity of not less than 300 mcd/lx·m² for white and contrast markings and not less than 250 mcd/lx·m² for yellow markings.

713-4.3.3 High Performance Markings: Apply white and yellow traffic stripes and markings that will attain an initial retroreflectivity of not less than 450 mcd/lx·m² for white and contrast markings and not less than 350 mcd/lx·m² for yellow markings.

713-4.4 Color: Use material meeting the requirements of 971-1.

ARTICLE 713-9 thru 713-10 (Page 807) is deleted and the following substituted:

713-9 Submittals.

713-9.1 Submittal Instructions: *Prepare a certification of quantities, using the Department's current approved form, for each project in the Contract. Submit the certification of quantities and daily worksheets to the Engineer. The Department will not pay for any disputed items until the Engineer approves the certification of quantities.*

713-9.2 Contractor's Certification of Quantities: *Request payment by submitting a certification of quantities no later than Twelve O clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification of quantities consists of the following:*

(a) *Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.*

(b) *The basis for arriving at the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.*

713-910 Method of Measurement.

~~713-9.1 General:~~ The quantities to be paid for under this Section will be as follows:

(a) The length, in net miles, of 6 inch Solid Traffic Stripe, authorized and acceptably applied.

(b) The total traversed distance in gross miles of 10-30- or 3-9- skip line. The actual applied line is 25% of the traverse distance, for a 1:3 ratio. This equates to 1,320 feet of marking per mile of single line.

(c) The net length, in feet, of all other types of lines and stripes, authorized and acceptably applied.

(d) The area, in square feet, of Remove Existing Markings acceptably removed.

(e) The number of pavement messages, symbols and directional arrows, authorized and acceptably applied.

~~713-9.2 Certification of Quantities Submittal Instructions: Prepare a certification of quantities, using the Department's current approved form, for each project in the Contract. Submit the certification of quantities and daily worksheets to the Engineer. The Department will not pay for any disputed items until the Engineer approves the certification of quantities.~~

~~Make all requests for payment by submitting these certifications no later than Twelve O'clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification of quantities consists of the following:~~

~~(a) Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.~~

~~(b) The basis for arriving at the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.~~

713-10/ Basis of Payment.

Prices and payments will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

Payment will be made under:

Item No. 713-101- Permanent Tape (Standard).

Item No. 713-102- Permanent Tape (High Performance).

PERMANENT TAPE STRIPES AND MARKINGS.**(REV 12-22-10)**

ARTICLE 713-3 (Page 805) is deleted and the following substituted:

713-3 Equipment.

Use equipment that is mobile and maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc.

Ensure the mechanical applicator is equipped with film cut-off device and a measuring device that automatically and accumulatively measures the length of each line placed with an accuracy tolerance of plus or minus 2 percent. Tape may be placed by hand on short sections, 500 feet or less if the tolerances in dimensions and in alignment specified in 710-5 are met.

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713-4.1 General: Remove existing traffic stripes and markings, such that scars or traces of removed markings will not conflict with new stripes and markings by a method approved by the Engineer.

Before applying traffic stripes and markings, remove any material by a method approved by the Engineer that would adversely affect the bond of the traffic stripes.

Apply a primer, sealer or surface preparation adhesive of the type recommended by the manufacturer. Ensure the tape stripes and markings adheres to the pavement surface.

Offset longitudinal lines at least 2 inches from construction joints on portland cement concrete pavement.

Apply traffic stripes or markings only to dry surfaces, and when the ambient air and surface temperature is at least 55°F and rising.

Apply striping to the same tolerances in dimensions and in alignment specified in 710-5. When applying traffic stripes and marking over existing markings, ensure that not more than 2 inches on either end and not more than 1 inch on either side of the existing line is visible.

Apply traffic stripes and markings to the pavement by means approved by the Engineer. The stripes and markings shall be installed immediately following the paving operation. Conduct field testing in accordance with FM 5-541. Take test readings representative of the striping performance. Remove and replace pavement stripes and markings not meeting the requirements of this Section at no additional cost to the Department.

Apply all final pavement markings prior to opening the road to traffic.

713-4.2 Thickness: Apply traffic stripes or markings such that, the stripes or markings will have a thickness as designated on the Qualified Products List for the particular product used.

Measure, record and certify on a Department approved form and submit to the Engineer, the thickness of white and yellow pavement markings in accordance with FM 5-541.

713-4.3 Retroreflectivity:

713-4.3.1 General: Black portions of contrast tapes and black masking tapes must have a reflectance of less than 5 mcd/lx m². Measure, record and certify on Department approved form and submit to the Engineer, the retroreflectivity of white and yellow pavement markings in accordance with Florida Method FM 5-541.

713-4.3.2 Standard Markings: Apply white and yellow traffic stripes and markings that will attain an initial retroreflectivity of not less than 300 mcd/lx·m² for white markings and not less than 250 mcd/lx·m² for yellow markings.

713-4.3.3 High Performance Markings: Apply white and yellow traffic stripes and markings that will attain an initial retroreflectivity of not less than 450 mcd/lx·m² for white markings and not less than 350 mcd/lx·m² for yellow markings.

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713-9.2 Contractor's Certification of Quantities: Request payment by submitting a certification of quantities no later than Twelve O clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification of quantities consists of the following:

- (a) Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.
- (b) The basis for arriving at the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.

713-10 Method of Measurement.

The quantities to be paid for under this Section will be as follows:

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- (b) The total traversed distance in gross miles of 10-30 or 3-9 skip line. The actual applied line is 25% of the traverse distance, for a 1:3 ratio. This equates to 1,320 feet of marking per mile of single line.
- (c) The net length, in feet, of all other types of lines and stripes, authorized and acceptably applied.
- (d) The area, in square feet, of Remove Existing Markings acceptably removed.
- (e) The number of pavement messages, symbols and directional arrows, authorized and acceptably applied.

713-11 Basis of Payment.

Prices and payments will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

Payment will be made under:

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